

National Aeronautics and Space Administration

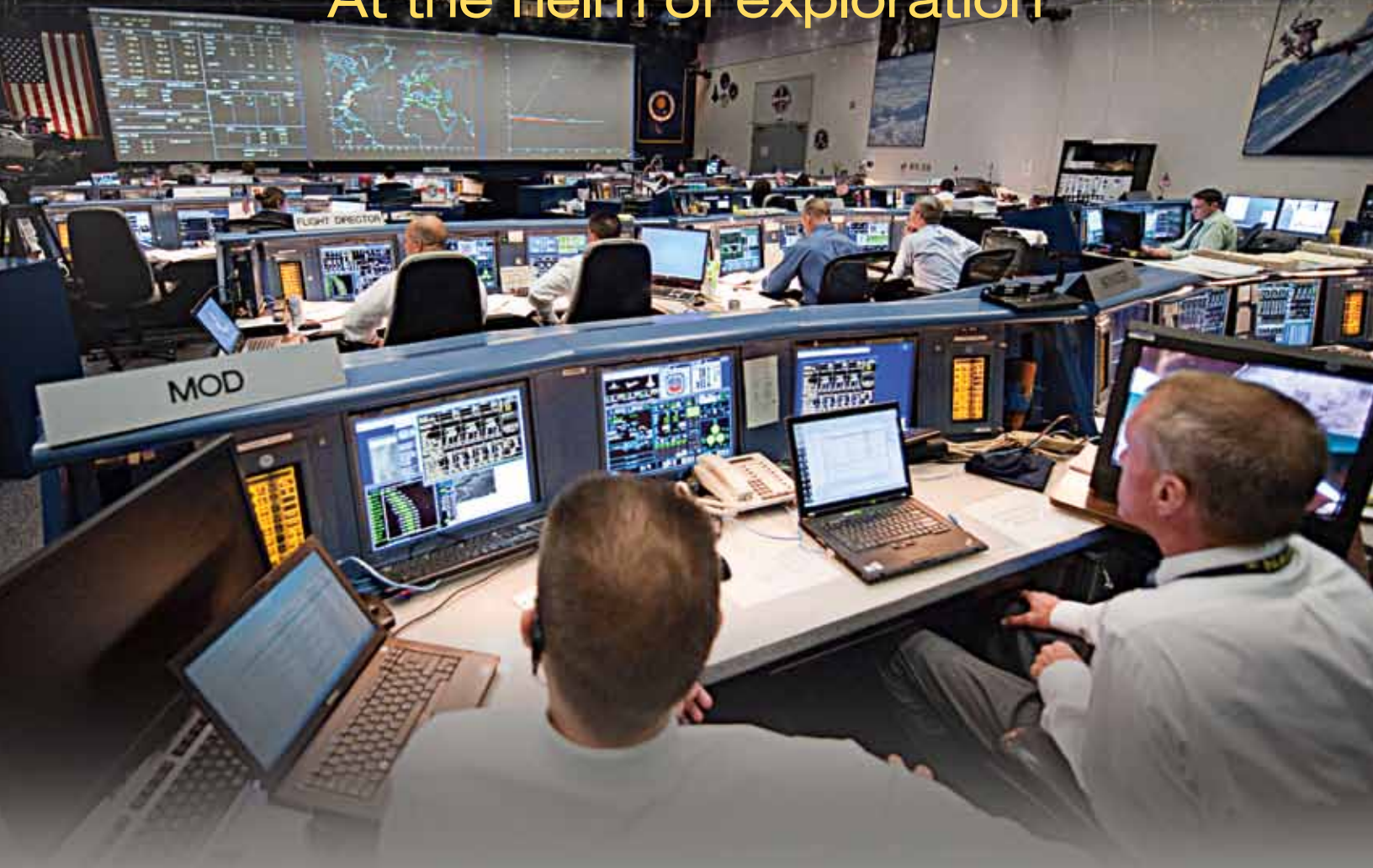


# Roundup

Lyndon B. Johnson Space Center

December | 2010

At the helm of exploration





# JSC Director



NASA/PHOTO BLAIR

## On the cover:

*STS-132 flight controllers on console during launch with Flight Director Richard Jones.*



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## Photo of the month:

*Space Shuttle Discovery's last ride. This image of Discovery was taken as the craft began its nighttime trek, known as "rollout," from the Vehicle Assembly Building to Launch Pad 39A.*

**As** we approach the holidays and the year 2010 draws to a close, I want to express my gratitude and appreciation for a tremendously successful year at Johnson Space Center. Our team of professionals has performed at the usual high level of expertise under unprecedented circumstances.

There is no doubt that this was a year of historic change for NASA and JSC.

My heartfelt appreciation goes out to the Space Shuttle Program workers, whose dedication and commitment have successfully and safely managed the remaining flights while also working to close out a 30-year legacy with dignity and honor. I applaud the courage and conviction of the Constellation Program team, as they have successfully accomplished their program goals while operating under stressful and unanticipated conditions. I celebrate working with our International Partners as the final architecture of the International Space Station is completed, and acknowledge the 10th anniversary of human habitation aboard the station, looking forward to the next decade of science and discovery.

Our space professionals have built the legacy of human spaceflight at JSC.

I salute the JSC family—our special team of civil servants and contractors who have steadfastly endured the sandstorm of change, and sometimes controversy, concerning the future direction of NASA as it has been discussed and debated in the media, policy forums and Congress. From programs to mission support, from Procurement to facilities, from Human Resources to the Information Resources Directorate, from the Chief Financial Officer to Equal Opportunity and Diversity, each day you have continued to ensure that our center operates at its best. I am so proud to be a part of this team, and I thank each and every one of you.

With the signing of the 2011 NASA Authorization Bill by the president, we have a more definitive direction for NASA. As I write this message, we wait for Congress to pass the Appropriations Bill to fund the authorized activities for 2011. With strong bipartisan support from Congress, I am confident that JSC will continue to play a critical role in implementing the directive spelled out in the new law signed by the president:

***"The long-term goal of the human spaceflight and exploration efforts of NASA shall be to expand permanent human presence beyond low-Earth orbit ..."***

Thank you for a great year, and have a wonderful holiday season.

*Mike*

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# HESTEC helps students reach for the stars



By Tammie Letroise-Brown

**For** nearly 10 years, Johnson Space Center has participated in Hispanic Engineering, Science and Technology Week (HESTEC) at the University of Texas-Pan American (UTPA) campus in Edinburg, Texas.

HESTEC is a yearlong program at UTPA. The weeklong conference promotes science, technology, engineering and math (STEM) education and highlights NASA to benefit the Rio Grande Valley community and the state of Texas. HESTEC Technology Week provides participants with a wide array of activities, from interactions with legislators to meet-and-greets with an astronaut, all the while expanding students' understanding of STEM careers.

"HESTEC is a dynamic event," said Joeletta Patrick, one of the program managers for the Education Office and HESTEC coordinator at JSC. "When you're there, you feel the impact that NASA and JSC have on the community. It's amazing to see how people are affected by the work that we do."



PHOTO COURTESY OF ELISA MORALES

**Jaqueline Cortez from the Human Research Program Education Office works with kids at a HESTEC workshop.**

the table, working with the kids at HESTEC and seeing that excitement in their eyes."

Students and parents who attend are eager to find out more about the space program and enjoy meeting an astronaut. This year, astronaut Lee Morin attended HESTEC. The words "real live astronaut" were uttered time and again while people shook hands with Morin. He signed more than 3,000 autographs and continued signing fliers and banners long after the last picture was taken.

The magic of HESTEC is not just realized in the onsite activities and the interaction with the students—it's the impression it makes on attendees like Ybarra and the motivation it gives them to chart their own path to a STEM career.



PHOTO COURTESY OF ELISA MORALES

**JSC volunteers Nora Ojo and Sharon Griffin interact with local students during an educational session at HESTEC.**

With more than 9,000 visitors to the NASA exhibit this year, it's very easy to see how excited the community gets about this event. HESTEC is such a major part of the Rio Grande Valley culture. On every local TV station, ads run each hour, on the hour, promoting the various talent and exhibits featured at the conference. The NASA exhibit is a standout; it's the one exhibit every visitor puts on their must-see list.

Former HESTEC program participants can personally vouch for the difference the program makes. Rick Ybarra attests to the impact the HESTEC program made on his own life. Ybarra is a graduate of UTPA and became a JSC co-op through a HESTEC career expo—and is now an engineer with Spacesuit and Crew Survival Systems.

Because Ybarra's first step in his JSC career was HESTEC, it was a privilege for him to be able to go back and participate in an event that played such a significant role in his life.

"I still remember being a small kid and watching the shuttle launch on TV for the first time, and after that being so excited to see the NASA exhibit," Ybarra said. "It was amazing going back on the other side of



PHOTO COURTESY OF SHARON GRIFFIN

**People wait for hours in line to view the NASA exhibit during HESTEC's Community Day on the University of Texas-Pan American campus.**





# JSC innovation team success



By Ashle' Robinson

**I**f you thought remote control (RC) helicopters and RC ground vehicles were just toys used by kids to perform aerobatic tricks, think again. These devices, along with a special van used in the former X-38 program, became a successful team submission to the Johnson Space Center Innovation Board.

What began as an effort to create pioneering avionics software for NASA's X-38 escape ship for the International Space Station evolved into a low-cost, rapid prototyping technology that is controlled from inside a fifteen-passenger van called the Advanced Cockpit Evaluation System (ACES). The ACES van can control an RC helicopter in the air and an RC rover over ground terrain.

The JSC innovation team that made this a reality came from a variety of areas at JSC, including Orion, the Mission Operation Directorate, Robotics and others.

"When (JSC Director) Mike Coats put out the innovation challenge, we thought about using the remote cockpit van from X-38, now known as ACES, as a mobile control center, along with the RC units to try and meet the challenge," said team lead Jeffrey Fox.

After a two-page presentation and a 60-second pitch to the JSC Innovation Board, Fox and his team received \$5,500 to prototype the T-REX 600 RC helicopter and sensor platform.

Susan Anderson, JSC Education Office lead of Informal Education and Special Projects, saw a possible outreach tool in the ground terrain RC rover at the 2010 American Institute of Aeronautics and Astronautics Conference Space Week in Anaheim, Calif. Education financed the construction of the RC rover.

"Students were able to get inside the ACES van (that is equipped with multiple flat panel displays) and use the sensor-mounted cameras while remotely controlling the rover over a mock Mars rock course," Fox said.

This technology enabled students to simulate how astronauts might maneuver surface robots from Orion's cockpit in a lunar or Mars orbit scenario.

"The rover navigates heavy terrain, provides a great landscape view and allows us to capture the images from both environments: air via the RC helicopter—and land through the rover," said Test and Logistics Manager Christie Sauers.

**The JSC innovation team works with the RC helicopter and rover.**

"Through Orion, we are making advancements in technology in and out of the program."

Collectively, this JSC innovation team created and integrated economical but effective hardware for the RC helicopter and rover that is mounted on a removable sensor platform.

"We developed the platform to carry the video, GPS and other



NASA/PHOTO JSC2010E184035

**The RC helicopter was constructed and flown in as little as six weeks. It has a carry and release capacity of about eight pounds and uses electric batteries that allow flight time of about seven minutes.**

altitude sensors," said Matt Hart, who works as the primary sensor and hardware integration engineer on the project. "The GPS and altitude sensors allow the creation of synthetic views blended with live video to be displayed on the wide multiple screens. There are four cameras and four video transmitters that feed images to the monitors in the cockpit where the pilot can control the vehicles."

Software Integrator Patrick Laport continues to develop the software system that allows views from the cameras to be displayed in the ACES cockpit on up to five large LCD monitors for a near 180-degree field of view.

The RC helicopter has about an 8- to 10-pound payload capability and is quiet, with low vibration for uses such as video recording.

"With its versatility and mobility, the ideas for both the helicopter and rover can be used for a wide array of innovation concepts," Fox said.

From planetary lander operations to situational awareness, from inspections of power lines, air and spacecraft, to seeking where a fire has started in a building, these little marvels are relatively inexpensive yet incredibly useful.

"I encourage folks to look for opportunities and submit ideas," Fox said. "Even if they aren't chosen as part of a center innovation call, you can still be innovative yourself or within a group about how you can accomplish your goals."

With something as simple and fun as an RC helicopter and rover, the innovation project and team displayed how NASA continues to encourage people of diverse talents and backgrounds to use their skills and ideas to innovate inside and outside of JSC.

**For the full story on this amazing collaborative effort, check out JSC Features: <http://www.jsc.nasa.gov/jscfeatures/>**

NASA/PHOTO JSC2010E184032





# JSC team members who provided assistance to trapped **Chilean** miners share their stories



By Rachel Kraft

**Sustaining** life in space is a challenge that NASA has researched—and conquered—for decades. When Chilean officials sought the agency's assistance to help keep alive and rescue 33 miners trapped 2,300 feet below ground near the small town of Copiapó, NASA readily drew upon its lessons learned during many space missions and countless confinement studies. At an all-hands meeting on Oct. 22, two NASA team members who flew to Chile to provide help—Johnson Space Center's Chief of Space Medicine Dr. J.D. Polk and psychologist Al Holland—gave details about NASA's support to the country.

NASA experts provided recommendations on how to build a rescue capsule, re-feed the miners (who sustained themselves on less than 100 calories each, every other day for 17 days), and maintain the health of everyone involved during the more than two months it took to bring the miners to safety.

Polk explained that NASA was able to draw upon a host of research and information, including the Hubble mission, and apply them to slightly different circumstances.



NASA/PHOTO

Earth, as seen in the “Blue Marble: Next Generation” collection of images, showing the color of the planet's surface in high resolution. This image shows South America from September 2004.

“If Hubble had gotten stranded, if the shuttle had gotten stranded ... we would have had to wait a month for a rescue shuttle to get there,” Polk said. “We had planned exactly, taking the shuttle crew down to less than 1,000 calories, how much phosphorous, how much potassium (they would need), how we were going to re-feed them.

“In typical NASA fashion, we created access databases and spreadsheets on how to calculate all these things in torrid manner. We



PHOTO COURTESY OF THE U.S. EMBASSY, SANTIAGO, CHILE

**NASA doctors Michael Duncan (center) and J.D. Polk (right) speak with Chilean naval doctor Andrés Llarena, a specialist in submersion medicine.**

had all of those answers. We had simulated it, we had practiced it, we had talked about it ... we had it immediately available on a thumb drive to give to them,” Polk said.

Holland noted that the Chilean officials deserve the bulk of the credit for the successful rescue, as do the miners themselves, who organized below surface level before a lifeline reached them. However, NASA was able to provide several key principles and countermeasures to make the rescue period more manageable for everyone involved.

One of them was getting the miners, families and top-side support to change their thinking from immediate extraction to long-duration support, since the people there hadn't been trained for months away from their families—let alone underground.

“They didn't have an existing infrastructure already set up to support them like our people did,” Holland said.

NASA's ambassadors to Chile also described things that personally struck them about applying the work that the agency does to the situation involving the trapped miners.

“This was a huge psychological boon for me, at least to see things that we take from spaceflight,” Polk said. “There wasn't a part of NASA that didn't touch on this—that some recommendation didn't get pulled from in some manner.

“The thing that struck me when we went down there that I did not realize is that the NASA brand still means something. It means something more than just in the United States. When the families found out we were coming, their hopes that the outcome was going to be positive went up,” Polk said.

Knowledge provided by nearly every component of the agency helped inform some aspect of the recommendations that NASA provided.

“The tentacles are so wide and far that there would be no way to put everybody's name on it,” Polk said.

## Supporting the Space Shuttle Program

# 100missions and counting

Nowadays, it is uncommon for an employee to remain with one company for their entire career. But in the Mission Operations Directorate (MOD), it's not uncommon for someone to dedicate their career to a single position. MOD has a lot of people who are this passionate about their jobs, including the following four outstanding individuals who have or soon will each hit the milestone of working 100 shuttle missions or more.

### Lonnie Schmitt:

From Gemini to Shuttle



Lonnie Schmitt's space career began in 1963 in St. Louis, working on Gemini environmental control systems for McDonnell Aircraft Company. From there, Schmitt moved to Kennedy Space Center, where he supported Gemini 3 to 12. Following his work on the Gemini Program, Schmitt went on to do advanced design work on missile systems and then moved back to St. Louis for 10 years. Schmitt landed at Johnson Space Center in February 1980, where he joined the Shuttle Propulsion Systems group.

"I still had a love for manned spacecraft and I wanted to get back in it, and the (Space) Shuttle Program was staffing up, so I transferred down here with McDonnell," Schmitt said.

Schmitt supported the first shuttle flight, STS-1, in a Multipurpose Support Room (MPSR) position. He continued to support shuttle missions from the MPSR and achieved certification as an Orbit Propulsion Officer in January 1984. He worked his first flight in the front room for STS-41B. STS-132 was Schmitt's 100th shuttle flight, and at the end of the STS-133 mission, he will have served as the Lead Prop Officer for 30 shuttle flights.

"I have been fortunate to be in this position," Schmitt said.

"My only regret is that I focused so much on missions and getting them done that I didn't get the chance to enjoy them."

Right before Hurricane Ike, Schmitt sold his house in Seabrook, Texas, and built a house in the Texas Hill Country, where he plans to retire at the end of the Space Shuttle Program.

"Watching the space station fly overhead in the Texas Hill Country is a much better view than you get here in the haze of Houston," Schmitt said. "And knowing that I helped build it is something I will treasure forever."

### Mike Marsh:

Ground support for every shuttle mission



Mike Marsh has been a Space Shuttle Ground Controller (GC) for the last 26 years. During that period, Marsh has supported nearly 120 shuttle flights in the flight control room. But his support of the program started long before that.

Marsh's space career began in the U.S. Air Force, working at a ground station in California tracking military satellites. He supported STS-1 while working there, before moving to Arizona and working at a radar site used to track the shuttle. From that location, Marsh supported missions STS-2 through STS-5 from a mountaintop near Tucson.

"When the opportunity to work in Mission Control in Houston presented itself, I jumped on it," Marsh said.

In his early years at JSC, Marsh worked missions STS-6 through STS-41C in a back room GC position called Ops Planning. He was promoted to the GC position in April 1984 and began supporting missions in the front room, starting with STS-41D.

"It still amazes me that I have been able to work my childhood dream job all these years," Marsh said. "In the 1960s, my father and I would go to special efforts to ensure we were able to watch the manned spacecraft launches on TV, and I would think to myself how terrific it would be to work in that business."

Marsh was the lead GC for Space Shuttle Flight Operations from November 1997 until February 2009, when he accepted a role supporting the Network Operations Integration Task in addition to his GC responsibilities. He plans to support all remaining missions as a GC because he truly loves the job.

"I have heard other people who work around here say in jest, 'They are paying me to work here, but I would pay them,' and it holds true for me," Marsh said.





By Sean Elizabeth Wilson

### Tom Bruchmiller:

Thirty-three years  
of navigating the  
shuttle



NASA/PHOTO ISS01E5483

Tom Bruchmiller's career spans more than 33 years of dedicated service supporting the Space Shuttle Program. He started out at McDonnell Douglas in 1977 in the ascent/entry ground navigation area, where he worked on the design and development of navigation software and interfaced with the tracking network for shuttle. It wasn't long before he was able to support the first shuttle mission.

"When it came time to support STS-1," Bruchmiller said, "I was selected to be on the ascent team in the MPSR."

During his career, Bruchmiller has played a key role in developing and implementing new procedures, process improvements, analyses and critical support during shuttle operations. It was just recently identified that he has performed navigation console operations for more than 100 missions. Of those missions, he still has vivid memories of one in particular.

"STS-1 really stood out," Bruchmiller said. "It was kind of a blur during the ascent, but it was some anticipation, some worries, and when everything went off as expected, it was a good feeling."

Currently with United Space Alliance, Bruchmiller is assigned to the Navigation and Flight Design Integration Department. He performs flight controller duties in the ascent/entry ground navigation and ascent/entry onboard navigation disciplines and has loved every minute of his career. He plans to see the program through to completion.

"When they did announce the end of the program," Bruchmiller said, "instead of looking for other work, I made the decision to stick it out until the end."

### Kevin McCluney:

Mechanics savvy  
100 missions in  
the making



NASA/PHOTO ISS01E6005730

After a year of job hunting following college graduation, Kevin McCluney landed in MOD's Mechanical Systems Group in 1984. With his computer programming experience, McCluney was able to jump right in and make a valuable contribution to his team from day one.

"When I started work here, the first steps were being made in upgrading the Mission Control Center to use Unix-based workstations," McCluney said. "Software applications were needed for these workstations, and since I had a programming background, I was able to produce applications, some of which are still in use today, while performing my flight controller tasks."

McCluney went on to work his first mission as a certified front room flight controller for STS-51D, and was able to obtain all Mechanical, Maintenance, Arm and Crew Systems (MMACS) certifications including Ascent/Entry MMACS by early 1989.

"I've spent my entire career working in the Mechanical Systems Group," McCluney said. "I've worked my way up through the various certified flight controller positions in the group—seven total."

In addition to being a certified flight controller in all of the positions in his discipline, McCluney currently holds the record for the total number of flights worked as a MMACS by 27 flights, including the most as an Ascent/Entry MMACS (34 total to date). STS-133 will be his 100th shuttle mission.

STS-49, the first flight of OV-105, is one mission that he remembers well.

"There were numerous changes to the orbiter's mechanical systems (hydraulic re-plumbing, drag chute, auxiliary power unit upgrades, etc.)," McCluney said. "It was a challenge to train for the flight with these system changes, and since it was the first flight of a new vehicle we expected, and got, numerous system problems to deal with throughout the flight."

With the end of the shuttle program on the horizon, McCluney plans on supporting all of the remaining flights from mission control. He's already involved with working on Orion and related follow-on projects and plans to continue doing so.

# 1970s astronaut Dr. Joseph Kerwin featured during October storytelling event



By Rachel Kraft

**During** the October Storytelling event, a program run by the Chief Knowledge Officer where Johnson Space Center employees share their experiences working for NASA, Dr. Joseph Kerwin spoke about his time on Skylab 2. The talk also centered on NASA's first experimental space station launched in 1973 and the evolution of space stations.

Kerwin, former director of Space and Life Sciences in the 1980s, told tales from the agency's early days, detailing the origins of

But completing those tasks wasn't always easy. Kerwin noted that the first two weeks aboard Skylab were austere because the station had limited power.

"We had to turn lights out whenever we left an area, we weren't allowed to heat the coffee, the shower was out of the question," Kerwin said.

As NASA's first space station crew, Skylab astronauts were also without

many of refinements to countermeasures that today's astronauts have. Straps that held crew members to a bicycle cut into their thighs, making it more difficult to stay fit, and they lacked a comprehensive rehabilitation program upon return to Earth. Nevertheless, Kerwin looked back on the journey fondly.

"We called (Skylab) the Von Braun Hilton," Kerwin said, referring to the chief architect of the Saturn V booster.

Kerwin also detailed the evolution of space stations at NASA. As he explained, although Skylab was—and the International Space Station is—primarily used as a scientific lab, using orbiting laboratories for experimental work was originally only one conceivable plan for how to use a permanently flying station.

"From the beginning, there have been a large number of roles assigned as possibilities to (space) stations," Kerwin said.

One such possibility, he explained, is as an intermediate stage on a journey and a hub to refuel during an interplanetary trip.

"I'm thinking something like a base camp on the way up to (Mt.) Everest or a coal stop on an old train trip to California," Kerwin said.

Many NASA officials also once favored creating a station to serve as a repair facility for satellites, but upon examination of costs they prioritized other ideas.

Creating a space station as a tourist destination has always been one plan.

"This was usually an afterthought a long time ago, but it's not an afterthought anymore," Kerwin said.

Regardless of its purpose, Kerwin explained, space stations should be part of a "robust system" of space vehicles and satellites.

"My bottom line is (that) there are a lot of good uses for space station, but it's never where you want your trip to end," Kerwin said. "A space station by itself would be like Disneyland in 1810. It'd be great if you could get to California—but you can't."



NASA/MSFC



NASA/PHOTO S72-17509

**The crew members for the first manned Skylab mission examine equipment. The crew consists of Charles (Pete) C. Conrad Jr., commander (standing left); scientist-astronaut Joseph P. Kerwin, seated; and astronaut Paul J. Weitz, pilot.**

the Skylab program. The former astronaut indicated that Skylab was initiated as a second act to the lunar landing program. It was designed as an experiment in long-duration spaceflight and to determine if a more permanent station was feasible.

"The driving objectives were to demonstrate that humans could function properly in zero g for up to three months, to collect the life support and human factors data design requirements for a permanent station and to demonstrate that significant science could be done by people floating around in space," Kerwin said.

The three-person crew that launched in May 1973 included Kerwin, Commander Charles (Pete) C. Conrad Jr. and pilot Paul J. Weitz. They rendezvoused with the unmanned Skylab on its fifth orbit and lived in space for 28 days. While aboard, they erected a parasol sunshade that cooled the station and conducted a variety of science and medical experiments to help determine how to sustain life in space.



## Partnership for innovation

### Johnson Space Center hosts AIAA Symposium



By Tammie Letroise-Brown

**On Oct. 13 and 14**, Johnson Space Center hosted the American Institute of Aeronautics and Astronautics (AIAA) Symposium at the Gilruth Center. The standing-room-only symposium created a unique opportunity for those in attendance by opening a door for a partnership between NASA and the commercial aerospace sector. The hope is to work with companies to build and operate safe, reliable and cost-effective commercial human space transportation systems.

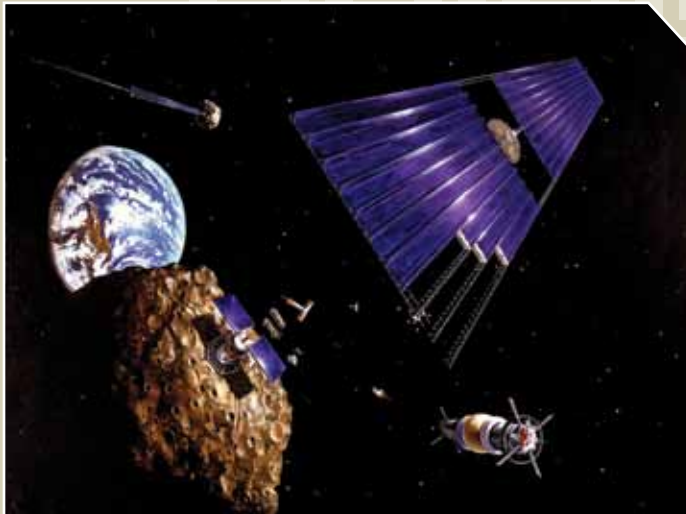
This meeting is not the first of its kind for JSC. The Texas Workforce Commission, the Greater Houston Partnership and Rice University hosted a similar symposium in September for those in various non-aerospace industries such as petroleum exploration, life sciences and advanced technologies.

Though there is a difference in the appeal that JSC may create for each audience, the basic message remains the same. That message is, "Let's work together." JSC's goal is that these events will stimulate strategic partnership discussions to ultimately advance human spaceflight capabilities and develop technology that can benefit consumers.

"I really like the way NASA is proposing to embed knowledgeable NASA personnel in the commercial companies to provide insight into how the companies are actually doing the design and construction work," said keynote speaker Jim Voss, vice president of Space Exploration Systems, Sierra Nevada Corporation. "This provides the government with a true inside view of the day-to-day operations and can remove some of the burdensome reporting of normal activities by companies."

Voss' perspective seemed to be echoed by most in the room. Given the new direction of the agency going forward, this is a first step in the race that will ultimately take us beyond low-Earth orbit.

Overall, the symposium was well received and similar events are planned for the future.



ARTIST CONCEPT BY DENISE WAIT.

**The AIAA Symposium stressed the importance of strategic partnerships to further exploration goals for the agency. This painting shows an artist's rendering of an asteroid-mining mission to an Earth-approaching asteroid.**

## NASA astronauts honor **U.S. veterans**



By Ashle' Robinson

**International Space Station** Expedition 25 Commander Doug Wheelock (Col., U.S. Army) and Flight Engineer Scott Kelly (Capt., U.S. Navy) paid tribute to United States service men and women around the world in a Veterans Day message. On behalf of the crew, Wheelock and Kelly thanked veterans and their families for their heroic deeds and dedication to serve the country.



CREDIT: NASA TV

**Expedition 25 Commander Doug Wheelock (right) and Flight Engineer Scott Kelly hold the Medal of Honor that was awarded to Sgt. Lester R. Stone Jr.**

During the message, Wheelock and Kelly held the Medal of Honor that was awarded to Sgt. Lester R. Stone Jr., who died at age 21 on March 3, 1969, while serving in Vietnam. His actions helped save the lives of his fellow soldiers and inspired his whole unit.

"We are carrying it as a tribute to all of those who have served and all of those who love freedom," Wheelock said. "We wanted to say a huge thank you to our veterans from outer space, from the crew of the International Space Station."

In addition to both having served in the U.S. Army, Wheelock and Stone were both born in Binghamton, N.Y. Following the completion of his mission, Wheelock plans to return the Medal of Honor to Sgt. Stone's mother.

"We make a lot of sacrifices living onboard the International Space Station for months on end," said Kelly, who will command Expedition 26 after Wheelock's departure from the station. "But those sacrifices pale in comparison to the sacrifices men and women around the globe from all of our armed services have made in this last 10 years specifically, but even more so during the entire history of our country."

**To view the citation of Sgt. Lester R. Stone Jr., visit:**  
<http://www.americal.org/moh7.shtml>

# Spotlight Amy Xenofos

## Assistant Chief Counsel for General Law and External Partnerships

**Q: Coolest part of your job?**

**A:** Visiting my clients in the buildings where they work and seeing all the amazing equipment and gadgets we have to prepare for space exploration missions.

**Q: Favorite hobbies or interesting things you do away from the office?**

**A:** None anymore—I have a 10-month-old at home!

**Q: What would you be doing if you weren't in your current job at Johnson Space Center?**

**A:** I really don't know. This was my first job out of law school and I love it so much. I don't think there is anything else I'd rather do. (Seriously.)

**Q: What did you want to grow up to be when you were a child?**

**A:** President of the United States.

**Q: What would people be surprised to know about you?**

**A:** That I've already been at NASA for over 10 years. (I moisturize ...)

**Q: What is your favorite food?**

**A:** Hot, cheesy pizza.

**Q: What is your favorite sport?**

**A:** To watch—baseball. To play—bowling. (It's like a sport ...)

**Q: Last good book you read?**

**A:** "Harry Potter and the Deathly Hallows." The whole series is so imaginative and has such great lessons about life and growing up.

**Q: Last good article you read?**

**A:** It was about the impact of cable news on our society in "Vanity Fair."

**Q: Favorite movie and why?**

**A:** "White Christmas"—for the music and the story about giving back to the people who are important to you.

**Q: Favorite music, artist or band and why?**

**A:** Keb Mo'—a blues singer/guitarist. His music mellows me out when I'm having a stressful day.

**Q: Who are your heroes and why?**

**A:** Anyone who has the strength and determination to overcome adversity to achieve their dreams.



NASA/PHOTO JSC2010E121040

**Q: What quality do you most admire in people?**

**A:** Competence.

**Q: What does JSC mean to you?**

**A:** Johnson Space Center. (I'm a lawyer and have been trained for years to answer only the specific question asked.)

**Q: What is your best memory at NASA or JSC?**

**A:** Meeting my husband while on assignment at NASA Headquarters.

## WANTED!

Do you know a JSC colleague or team that does something extraordinary on or off the job? Whether it's a unique skill, interesting work, special professional accomplishment, remarkable second career, hobby or volunteerism, your nominee(s) may deserve the spotlight!

The Roundup shines the light on one special person or team each month, chosen from a cross section of the JSC workforce. To suggest "Spotlight" candidates, send your nomination to the JSC Roundup Office mailbox at [jsc-roundup@mail.nasa.gov](mailto:jsc-roundup@mail.nasa.gov). Please include contact information and a brief description of why your nominee(s) should be considered.





## The season of giving

**At this time of the year**, when so many of us focus on giving to others, it is important to remember that all Johnson Space Center team members have something to give. It costs absolutely nothing—but the value is priceless.

PHOTO MICHAEL HARE



(From left to right) JSC Education Director Susan White with longtime volunteers Mike Ewert and George Salazar and Education Outreach Coordinator Julie Mules.

With the Education Outreach Program, JSC employees can go out into the local community and inspire the next generation of explorers. While NASA evolves through this transitional phase, it is paramount that we continue to share the NASA story and excite the youth of today about the space program of tomorrow.

Education Outreach receives requests from educational institutions within a 50-mile radius of JSC, and volunteer opportunities range from career day speakers to science fair judges, to reading mentors and job-shadowing opportunities.

There is something for everyone. Time and time again, the Education Office receives letters from both students and teachers detailing the tremendous positive effects that JSC volunteers have had on them.

YOU can make a difference. The Education Outreach office will equip you with a variety of tools to help enhance your volunteer experience, whether that be tips for preparing and presenting your speech or sending you out with show-and-tell items to share with students. Anyone can teach with Education Outreach.

Visit <http://education.jsc.nasa.gov/volunteer> and register as a volunteer. Educational institutions that would like to post their events may do so at: <http://education.jsc.nasa.gov/outreach>

For more information, contact Education Outreach Coordinator Julie Mules at [Julia.mules@nasa.gov](mailto:Julia.mules@nasa.gov) or 281-244-5574.



NASA/PHOTO STAFFORD AND HARNETT

Education Outreach coordinated Bring Our Children to Work Day 2010. The event reached more than 1,000 JSC team members and their families.

## Ballunar elevates excitement and enthusiasm for space

**The 17th Annual** Ballunar Liftoff Festival, camped on JSC grounds from Oct. 29 to 31, provided awe-inspiring glimpses of hot air balloons and much more in the way of entertainment. During JSC's own open house on Oct. 30, held

in conjunction with the festival, participants were able to obtain astronaut autographs from Megan McArthur, Karen Nyberg, Ellen Ochoa and Mike Baker, as well as tour many of the famed buildings that support NASA's exploration goals.

NASA/HARNETT JSC2010E181943



NASA/HARNETT JSC2010E181900

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## Statement by the president on the 10th anniversary of crews aboard the **International Space Station** — Nov. 2, 2010



NASA/PHOTO 494799MAIN\_ISS025E010008\_FULL

*The Expedition 25 crew aboard the International Space Station shot this nighttime image of the northern Gulf Coast. Mobile Bay and the cities of Mobile, New Orleans and Houston are visible as the view moves southeastward. The Interstate Highway 20 cities of Jackson, Shreveport, Dallas and Fort Worth are also visible further inland.*

### JSC team members eligible to play geography trivia from space

*Where Over the World is Astronaut Scott Kelly? Tweet to test your global IQ.*

How to play: Users follow @StationCDRKelly on Twitter. Kelly will tweet from space a photo during the Expedition 25/26 flight. The first person to @reply to @StationCDRKelly with the correct answer wins. Use the hashtag #spacegeo after your reply and to follow the geography game on Twitter from space. Players are competing to be the first to name that inkblot of Earth from space to win a printed photo of the shot taken from space and autographed by astronaut Kelly after his return to Earth. At the end of each week, the trivia photo will be posted to <http://www.nasa.gov>, along with the winner's name.

View Kelly's first contest photo at <http://twitpic.com/377ktn> and a video from the cupola: <http://go.usa.gov/CvB>

For more information and contest rules, go to: <http://go.usa.gov/CvK>

**(Nov. 2) marks** an important milestone in the history of human exploration. For the past decade, men and women from 15 nations have lived and worked together in space in the peaceful pursuit of science and exploration. The first crew of the International Space Station took up residence 200 miles above Earth on this date 10 years ago and we have had a sustained human presence in space ever since.

Truly an international endeavor, the space station has brought disparate nations together for a common purpose—to better our lives on Earth. More than 600 experiments conducted in orbit aboard this amazing laboratory have contributed to important research designed to improve the quality of life for everyone.

Because of the extraordinary value of this orbiting research outpost, earlier this year I proposed extending the life of the space station until at least 2020 so that NASA can pioneer new frontiers in education and international cooperation that will maximize the scientific return of this important foothold in space. Congress overwhelmingly agreed, and I was recently able to sign into law legislation that calls for extending the life of the space station for at least another 10 years.

As we look to the next 10 years, we can only imagine what's in store for our future astronauts, engineers and scientists. I am committed to ensuring that NASA continues along a sustainable path as an international leader in space exploration and as an inspiration to a new generation of explorers to pursue careers in science, technology, engineering and mathematics.

As we look to the future of America's continued leadership in space and think about the steps we will take in the months and years to come to extend humanity's reach beyond Earth orbit, I would like to say thank you and a job well done to the men and women who have contributed to this historic achievement.